

CLAIMS

- 1 1. An air flow control system comprising,
2 a lightweight headgear structure,
3 a fan mounted to said headgear structure to generate air flow around
4 said headgear structure,
5 air flow monitoring means mounted to said headgear structure to
6 monitor the air flow adjacent to said headgear structure.

- 1 2. The system recited in claim 1 including,
2 a power supply connected to supply power to said fan.

- 1 3. The system recited in claim 1 wherein,
2 said air flow monitoring system is a mechanical apparatus.

- 1 4. The system recited in claim 1 wherein,
2 said air flow monitoring system is an electrical apparatus.

- 1 5. The system recited in claim 1 wherein,
2 said power supply comprises a battery.

- 1 6. The system recited in claim 1 including,
2 a shroud adapted for covering said headgear structure.

- 1 7. The system recited in claim 2 including,
2 first indicia means connected with said air flow monitoring means to
3 provide an indication of a predetermined operating condition thereof.

1 8. The system recited in claim 7 wherein,

2 said first indicia means comprises a light emitting diode.

1 9. The system recited in claim 2 including,

2 second indicia means connected to said power supply to provide an

3 indication of a predetermined operating condition thereat.

1 10. The system recited in claim 9 wherein,

2 said second indicia means comprises a light emitting diode.

1 11. The system recited in claim 3 wherein,

2 said air flow monitoring means includes a pivotally mounted arm which

3 is selectively positioned by an air flow around said headgear structure.

1 12. The system recited in claim 11 including,

2 a reference magnet mounted to said headgear structure adjacent to

3 said arm,

4 a positioning magnet mounted on said arm and adapted to interact with

5 said positioning magnet to locate said arm.

1 13. The system recited in claim 12 including,

2 a Hall-effect device mounted on said headgear structure,

3 a sensing magnet mounted on said arm to selectively alter the

4 operation of said Hall-effect device as a function of said arm.

1 14. The system recited in claim 4, wherein,
2 said air flow monitoring system includes a current sensing device for
3 determining the amount of current supplied to said fan.

1 15. The system recited in claim 14 including,
2 voltage regulator means for supplying a relatively fixed voltage to said
3 current sensing device, and
4 a sensing circuit connected to said current sensing means for detecting
5 an excessive current in said current sensing mean.

1 16. The system recited in claim 15 wherein,
2 said sensing circuit includes an operational amplifier.

1 17. The system recited in claim 3 including,
2 a voltage detect circuit connected to a power supply to detect the output
3 level therefrom.

1 18. The system recited in claim 4 wherein,
2 said air flow monitoring system includes
3 a voltage sensing device for determining the amount of voltage supplied
4 to said fan.

1 19. The system recited in claim 18 including,
2 a current controlling means for supplying a relatively fixed current to
3 said voltage sensing device.

1 20. The system recited in claim 5 including,
2 a battery voltage monitoring means to monitor the voltage level
3 produced by said battery.